

PATIENT SPOTLIGHT

Nasopharyngeal Schwannoma



Fig 1. Axial T1 post contrast MRI indicating tumor extension into the left parapharyngeal space adjacent to the carotid sheath.

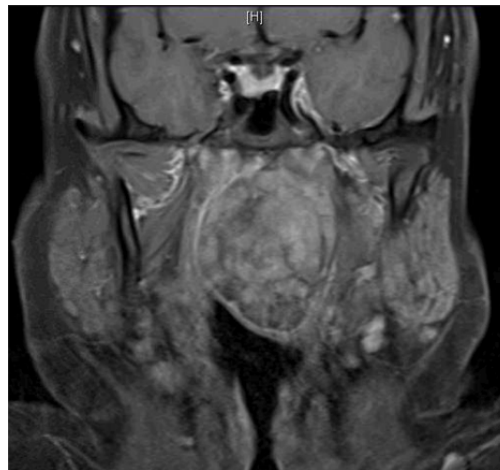


Fig 2. Coronal T1 post contrast MRI with heterogenous signal intensities and contrast enhancement.

A 33 year old male with history of severe obstructive sleep apnea, morbid obesity and long standing nasal obstruction.

CLINICAL SIGNS AND MANAGEMENT

The patient had a long-standing history of obstructive symptoms with a sleep study revealing AHI>100, and nasal obstruction despite medical therapy. Nasal endoscopy revealed submucosal fullness that was obliterating the nasopharynx. The cranial nerve exam was normal. Subsequent MRI imaging revealed an approximately 7cm x 4cm lobulated, contrast-enhancing heterogeneous mass with smooth borders occupying the entire nasopharynx with some extension into the parapharyngeal space

The patient was taken to the operating room for a combined two-surgeon transoral robotic and transnasal endoscopic approach. A superiorly-based posterior pharyngeal flap was elevated thru the pharyngeal constrictor muscles and the tumor was dissected using the DaVinci robot to the prevertebral fascia and laterally to the carotid sheath. Transnasal endoscopy was then performed, the pharyngeal flap was retracted superiorly and a combination of blunt and sharp dissection was utilized to release the superior attachment of the tumor. The entire tumor was delivered en bloc and removed transorally. The pharyngeal flap was advanced laterally to cover the carotid and closed with vicryl sutures. The patient did very well post operatively.



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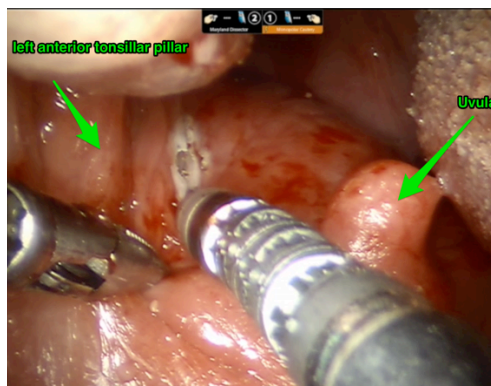


Fig 3. View thru robotic console with the initial incision of the superiorly based pharyngeal flap.

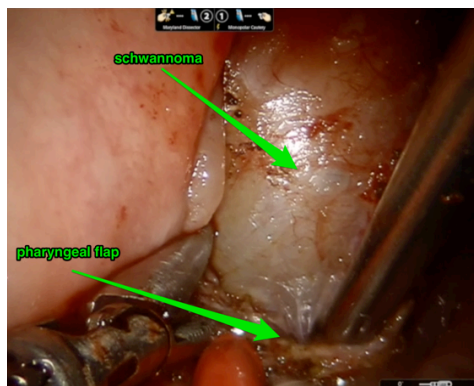
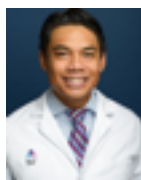


Fig 4. Tumor nearly completely dissected free

CLINICAL REVIEW

Schwannomas can originate from peripheral motor, sensory, sympathetic and cranial nerves with the exception of the olfactory and optic nerves because they lack a nerve sheath that contains Schwann cells. Peripheral nerve sheath tumors of the nasopharynx and nasal cavity can originate from the maxillary or ophthalmic branches of the trigeminal nerve or from branches of the autonomic. These tumor tend to be slow-growing and tend to only present themselves when they are grow to a substantial size. Both MRI and CT imaging are useful in initial evaluation of these masses.

The tumors tend to be resistant to radiotherapy so surgical excision is the treatment of choice. Approach to these tumors is dictated by the preoperative assessment, namely findings on both CT and MR imaging. There are a number of approaches to the skull base and nasopharynx, however the ideal approach would allow the surgeon to completely excise the mass while limiting the morbidity of the approach. Because of our centers experience with both transoral robotic surgery and endoscopic skull base surgery we chose a combined minimally-invasive approach which allowed for a complete surgical resection without any facial or palatal incisions. An alternative approach to this tumor would be via a transoral/transpalatal approach which would have allowed for access to the tumor but is also associated with velopharyngeal insufficiency, dysphonia and dysphagia due to the disruption of the soft palate.



By Alfred Iloreta, MD
Assistant Professor
Department of Otolaryngology
Endoscopic Skull Base Surgery
The Mount Sinai Hospital

and



Brett Miles, MD, DDS
Assistant Professor
Department of Otolaryngology
Head And Neck Surgery
The Mount Sinai Hospital

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Alfred Iloreta, MD
Rhinology and Skull
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Brett A. Miles, MD, DDS
Head and Neck Cancer

Joshua D. Rosenberg, MD
Facial Plastics,
Head and Neck Cancer

Eric E. Smouha, MD
Director, Neuro-Otology

Marita S. Teng, MD
Head and Neck Cancer

Benjamin Tweel, MD
General Otolaryngology

Mike Yao, MD
Head and Neck Cancer

Manhattan:

Faculty Practice Associates
5 East 98th Street, 8th Floor
New York, NY 10029

Center for Science and Medicine
10 East 102nd St, 3rd Floor
New York, NY 10029

Staten Island:

2052 Richmond Road, Suite C
Staten Island, NY 10306

Long Island:

325 Park Avenue
Huntington, NY 11743